Welcome to STN International! Enter x:x

LOGINID: SSPTANXR1625

PASSWORD:

NEWS HOURS

NEWS INTER

NEWS LOGIN

NEWS PHONE

NEWS WWW

TERMINAL (ENTER 1, 2, 3, OR ?):2

```
NEWS 1
                Web Page URLs for STN Seminar Schedule - N. America
NEWS 2
                "Ask CAS" for self-help around the clock
NEWS 3 DEC 05
               CASREACT(R) - Over 10 million reactions available
NEWS 4 DEC 14 2006 MeSH terms loaded in MEDLINE/LMEDLINE
NEWS 5
        DEC 14 2006 MeSH terms loaded for MEDLINE file segment of TOXCENTER
        DEC 14 CA/CAplus to be enhanced with updated IPC codes
NEWS 6
        DEC 21
NEWS
    7
                IPC search and display fields enhanced in CA/CAplus with the
                IPC reform
        DEC 23
NEWS
     8
                New IPC8 SEARCH, DISPLAY, and SELECT fields in USPATFULL/
                USPAT2
                IPC 8 searching in IFIPAT, IFIUDB, and IFICDB
NEWS 9
        JAN 13
NEWS 10 JAN 13
                New IPC 8 SEARCH, DISPLAY, and SELECT enhancements added to
                INPADOC
NEWS 11 JAN 17 Pre-1988 INPI data added to MARPAT
NEWS 12 JAN 17 IPC 8 in the WPI family of databases including WPIFV
NEWS 13 JAN 30 Saved answer limit increased
NEWS 14 JAN 31 Monthly current-awareness alert (SDI) frequency
                added to TULSA
NEWS 15 FEB 21
               STN AnaVist, Version 1.1, lets you share your STN AnaVist
                visualization results
NEWS 16 FEB 22
               Status of current WO (PCT) information on STN
NEWS 17 FEB 22 The IPC thesaurus added to additional patent databases on STN
NEWS 18 FEB 22 Updates in EPFULL; IPC 8 enhancements added
NEWS EXPRESS
            FEBRUARY 15 CURRENT VERSION FOR WINDOWS IS V8.01a,
             CURRENT MACINTOSH VERSION IS V6.0c(ENG) AND V6.0Jc(JP),
             AND CURRENT DISCOVER FILE IS DATED 19 DECEMBER 2005.
             V8.0 AND V8.01 USERS CAN OBTAIN THE UPGRADE TO V8.01a AT
```

Enter NEWS followed by the item number or name to see news on that specific topic.

General Internet Information

Welcome Banner and News Items

All use of STN is subject to the provisions of the STN Customer agreement. Please note that this agreement limits use to scientific research. Use for software development or design or implementation of commercial gateways or other similar uses is prohibited and may result in loss of user privileges and other penalties.

http://download.cas.org/express/v8.0-Discover/

STN Operating Hours Plus Help Desk Availability

CAS World Wide Web Site (general information)

Direct Dial and Telecommunication Network Access to STN

FILE 'HOME' ENTERED AT 09:44:18 ON 28 FEB 2006

=> file reg
COST IN U.S. DOLLARS

SINCE FILE TOTAL ENTRY SESSION 0.21 0.21

FULL ESTIMATED COST

FILE 'REGISTRY' ENTERED AT 09:44:27 ON 28 FEB 2006 USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT. PLEASE SEE "HELP USAGETERMS" FOR DETAILS. COPYRIGHT (C) 2006 American Chemical Society (ACS)

Property values tagged with IC are from the ZIC/VINITI data file provided by InfoChem.

STRUCTURE FILE UPDATES: 26 FEB 2006 HIGHEST RN 875270-69-2 DICTIONARY FILE UPDATES: 26 FEB 2006 HIGHEST RN 875270-69-2

New CAS Information Use Policies, enter HELP USAGETERMS for details.

TSCA INFORMATION NOW CURRENT THROUGH January 6, 2006

Please note that search-term pricing does apply when conducting SmartSELECT searches.

Structure search iteration limits have been increased. See $\mbox{HELP SLIMITS}$ for details.

REGISTRY includes numerically searchable data for experimental and predicted properties as well as tags indicating availability of experimental property data in the original document. For information on property searching in REGISTRY, refer to:

http://www.cas.org/ONLINE/UG/regprops.html

Uploading C:\Program Files\Stnexp\Queries\10817532.str

G1 G1 24 25 G_1 19 G₁ G_1 20 23 G_1 22 0 14 16 15

chain nodes :

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 19 20 22 23 24 25 chain bonds:

1-2 2-3 2-19 3-4 3-14 4-5 4-20 5-6 5-15 6-7 6-22 7-8 8-9 8-23 9-10 10-11 10-24 11-12 11-16 12-13 12-25 13-17

exact/norm bonds: 2-19 3-14 4-20 5-15 6-22 8-23 10-24 11-16 12-25

exact bonds :

1-2 2-3 3-4 4-5 5-6 6-7 7-8 8-9 9-10 10-11 11-12 12-13 13-17

G1:H,Ak

Match level:

1:CLASS 2:CLASS 3:CLASS 4:CLASS 5:CLASS 6:CLASS 7:CLASS 8:CLASS 9:CLASS 10:CLASS 11:CLASS 12:CLASS 13:CLASS 14:CLASS 15:CLASS 16:CLASS 17:CLASS 19:CLASS 20:CLASS 22:CLASS 23:CLASS 24:CLASS 25:CLASS

L1STRUCTURE UPLOADED

=> d 11

L1 HAS NO ANSWERS

L1 STR

G1 H, Ak

Structure attributes must be viewed using STN Express query preparation.

=> s 11

SAMPLE SEARCH INITIATED 09:44:46 FILE 'REGISTRY' SAMPLE SCREEN SEARCH COMPLETED -4 TO ITERATE

4 ITERATIONS 1 ANSWERS 100.0% PROCESSED

SEARCH TIME: 00.00.01

FULL FILE PROJECTIONS: ONLINE **COMPLETE** **COMPLETE** BATCH PROJECTED ITERATIONS: 200 4 TO

PROJECTED ANSWERS: 1 TO 80

L2 1 SEA SSS SAM L1

=> s l1 full

FULL SEARCH INITIATED 09:44:56 FILE 'REGISTRY' 61 TO ITERATE FULL SCREEN SEARCH COMPLETED -

14 ANSWERS 100.0% PROCESSED 61 ITERATIONS

SEARCH TIME: 00.00.01

L3 14 SEA SSS FUL L1

=> file caplus

COST IN U.S. DOLLARS SINCE FILE TOTAL ENTRY SESSION 166.94 167.15 FULL ESTIMATED COST

FILE 'CAPLUS' ENTERED AT 09:45:02 ON 28 FEB 2006 USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT. PLEASE SEE "HELP USAGETERMS" FOR DETAILS.

Copyright of the articles to which records in this database refer is held by the publishers listed in the PUBLISHER (PB) field (available for records published or updated in Chemical Abstracts after December 26, 1996), unless otherwise indicated in the original publications. The CA Lexicon is the copyrighted intellectual property of the American Chemical Society and is provided to assist you in searching databases on STN. Any dissemination, distribution, copying, or storing of this information, without the prior written consent of CAS, is strictly prohibited.

FILE COVERS 1907 - 28 Feb 2006 VOL 144 ISS 10 FILE LAST UPDATED: 27 Feb 2006 (20060227/ED)

Effective October 17, 2005, revised CAS Information Use Policies apply. They are available for your review at:

http://www.cas.org/infopolicy.html

=> s 13 full

L418 L3

=> s 14 and py<2003 22791054 PY<2003

8 L4 AND PY<2003

=> d ibib abs hitstr tot

ANSWER 1 OF 8 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2002:575783 CAPLUS

DOCUMENT NUMBER:

137:125048

TITLE:

Preparation of compounds which mimic the chemical and

biological properties of discodermolide

INVENTOR(S):

Smith, Amos B.; Beauchamp, Thomas J.; Lamarche,

Matthew J.

PATENT ASSIGNEE(S):

SOURCE:

The Trustees of The University of Pennsylvania, USA U.S. Pat. Appl. Publ., 127 pp., Cont.-in-part of U.S.

Ser. No. 455,649. CODEN: USXXCO

DOCUMENT TYPE:

Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT:

PATENT NO.		TE A	APPLICATION NO.	DATE
US 2002103387	A1 20	020801 t	JS 2000-730929	20001206 <
US 6870058	B2 20	050322		
US 5789605	A 19	980804 t	JS 1996-759817	19961203 <
US 6031133	A 20	000229 τ	JS 1998-21878	19980211 <
US 6242616	B1 20	010605 ι	JS 1999-455649	19991207 <
CA 2431045	AA 20	020613	CA 2001-2431045	20011206 <
WO 2002046150	A2 20	020613 V	TO 2001-US47958	20011206 <
WO 2002046150	A3 20	020613		
W: AE, AG, AL,	AM, AT, A	U, AZ, BA,	BB, BG, BR, BY,	BZ, CA, CH, CN,
CO, CR, CU,	CZ, DE, Di	K, DM, DZ,	EC, EE, ES, FI,	GB, GD, GE, GH,
GM, HR, HU,	ID, IL, II	N, IS, JP,	KE, KG, KP, KR,	KZ, LC, LK, LR,
LS, LT, LU,	LV, MA, M	D, MG, MK,	MN, MW, MX, MZ,	NO, NZ, OM, PL,
PT, RO, RU,	SD, SE, S	G, SI, SK,	SL, TJ, TM, TR,	TT, TZ, UA, UG,
US, UZ, VN,	YU, ZA, ZI	M, ZW		
RW: GH, GM, KE,	LS, MW, M	Z, SD, SL,	SZ, TZ, UG, ZM,	ZW, AT, BE, CH,

```
CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR,
             BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG,
             AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
    AU 2002027375
                                            AU 2002-27375
                          Α5
                                20020618
                                                                    20011206 <--
    EP 1585725
                          A2
                                20051019
                                            EP 2001-996231
                                                                    20011206
            AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
             IE, FI, CY, TR
     ZA 2003004259
                          Α
                                20050425
                                            ZA 2003-4259
                                                                    20030530
    US 2005065353
                          A1
                                20050324
                                            US 2004-779049
                                                                    20040213
    WO 2005079378
                          A2
                                20050901
                                            WO 2005-US4643
                                                                    20050211
            AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH,
             CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD,
             GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC,
             LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI,
             NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY,
             TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW
         RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM,
             AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK,
             EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT,
             RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML,
             MR, NE, SN, TD, TG
PRIORITY APPLN. INFO.:
                                            US 1996-759817
                                                                 A2 19961203
                                            US 1998-21878
                                                                 A2 19980211
                                            US 1999-455649
                                                                 A2 19991207
                                            US 1998-121551
                                                                 A2 19980723
                                            US 2000-730929
                                                                    20001206
                                                                 Α
                                            WO 2001-US47958
                                                                 W
                                                                    20011206
                                            US 2004-779049
                                                                 Α
                                                                    20040213
OTHER SOURCE(S):
```

GI

MARPAT 137:125048

AΒ Discodermolide analogs, such as I [R = H, OR33; X = H2, O; R4, R9, R33 = H, acid labile protecting group; R25 = H, oxidatively labile protecting group; R16, R32 = H, alkyl], were prepared Synthetic routes to both (-)and (+)-discodermolide were presented.

Ι

IT 252342-54-4P

> RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(preparation of compds. which mimic the chemical and biol. properties of discodermolide)

RN 252342-54-4 CAPLUS CN Phosphonium, [(2R,3R,4S,5Z,8S,9R,10R,11S,12S,13Z)-3,9-bis[[(1,1-dimethylethyl)dimethylsilyl]oxy]-11-[(4-methoxyphenyl)methoxy]-2,4,6,8,10,12-hexamethyl-5,13,15-hexadecatrienyl]triphenyl-, iodide (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (+). Double bond geometry as shown.

• I-

REFERENCE COUNT:

50 THERE ARE 50 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 2 OF 8 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER:

2002:449643 CAPLUS

DOCUMENT NUMBER:

137:33164

TITLE:

Preparation of compounds which mimic the chemical and

biological properties of discodermolide

INVENTOR(S):

Smith, Amos B., III; Beauchamp, Thomas J.; Lamarche,

Matthew J.

PATENT ASSIGNEE(S):

The Trustees of the University of Pennsylvania Center

for Technology Transfer, USA

SOURCE:

PCT Int. Appl., 267 pp.

DOCUMENT TYPE:

CODEN: PIXXD2 Patent

LANGUAGE:

English

FAMILY ACC. NUM. COUNT:

PAT	ENT I	.OV			KIN	D	DATE		1	APPL	ICAT	ION 1	NO.						
WO	2002	0461	50		A2	-	20020613			WO 2	001-	US47	 958			0011	206 <		
WO	2002	0461	50		A3		2002	0613											
	W:	ΑE,	AG,	AL,	AM,	ΑT,	AU,	AZ,	BA,	BB,	BG,	BR,	BY,	BZ,	CA,	CH,	CN,		
		CO,	CR,	CU,	CZ,	DE,	DK,	DM,	DZ,	EC,	EE,	ES,	FI,	GB,	GD,	GE,	GH,		
		GM,	HR,	HU,	ID,	IL,	IN,	IS,	JP,	ΚE,	KG,	ΚP,	KR,	ΚZ,	LC,	LK,	LR,		
		LS,	LT,	LU,	LV,	MA,	MD,	MG,	MK,	MN,	MW,	MX,	MZ,	NO,	NZ,	OM,	PL,		
		PT,	RO,	RU,	SD,	SE,	SG,	SI,	SK,	SL,	ТJ,	TM,	TR,	TT,	TZ,	UA,	UG,		
		US,	UZ,	VN,	YU,	ZA,	ZM,	ZW											
	RW:	GH,	GM,	KE,	LS,	MW,	MZ,	SD,	SL,	SZ,	TZ,	UG,	ZM,	ZW,	AT,	BE,	CH,		
		CY,	DE,	DK,	ES,	FI,	FR,	GB,	GR,	ΙE,	IT,	LU,	MC,	NL,	PT,	SE,	TR,		
		BF,	BJ,	CF,	CG,	CI,	CM,	GA,	GN,	GQ,	GW,	ML,	MR,	NE,	SN,	TD,	TG,		
		AM,	ΑZ,	BY,	KG,	KZ,	MD,	RU,	TJ,	TM									
US	2002	1033	87		A1		2002	0801	1	US 2	000-	7309	29		2	0001	206 <		
US	6870	058			B2		20050322												
CA	2431	045			AA		2002	0613 CA 2001-2431				2431	045		20011206 <				
AU	2002	0273	75		A 5		2002	020618 AU 2002-27375						20011206 <					

```
EP 1585725
                          A2
                                20051019
                                            EP 2001-996231
                                                                    20011206
            AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
             IE, FI, CY, TR
     WO 2005079378
                          A2
                                20050901
                                            WO 2005-US4643
                                                                    20050211
            AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH,
             CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD,
             GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC,
             LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI,
             NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY,
             TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW
         RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM,
             AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK,
             EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT,
             RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML,
             MR, NE, SN, TD, TG
PRIORITY APPLN. INFO.:
                                            US 2000-730929
                                                                 A 20001206
                                            US 1996-759817
                                                                 A2 19961203
                                            US 1998-21878
                                                                 A2 19980211
                                            US 1999-455649
                                                                 A2 19991207
                                            WO 2001-US47958
                                                                    20011206
                                                                 W
                                            US 2004-779049
                                                                    20040213
                                                                 Α
OTHER SOURCE(S):
                         MARPAT 137:33164
```

AB Discodermolide analogs, such as I [R = H, OR33; X = H2, O; R4, R9, R33 = H, acid labile protecting group; R25 = H, oxidatively labile protecting group; R16, R32 = H, alkyl], were prepared Synthetic routes to both (-)-and (+)-discodermolide were presented.

I.

IT 252342-54-4P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(preparation of compds. which mimic the chemical and biol. properties of discodermolide)

RN 252342-54-4 CAPLUS

CN Phosphonium, [(2R,3R,4S,5Z,8S,9R,10R,11S,12S,13Z)-3,9-bis[[(1,1-dimethylethyl)dimethylsilyl]oxy]-11-[(4-methoxyphenyl)methoxy]-2,4,6,8,10,12-hexamethyl-5,13,15-hexadecatrienyl]triphenyl-, iodide (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (+). Double bond geometry as shown.

• I-

L5 ANSWER 3 OF 8 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER:

2002:123244 CAPLUS

DOCUMENT NUMBER:

136:183657

TITLE:

Process for the biomediated preparation of

intermediates for use in the synthesis of polyketides,

such as epothilone D and discodermolide

INVENTOR(S):

Santi, Daniel V.; Ashley, Gary; Myles, David C.

PATENT ASSIGNEE(S):

Kosan Biosciences, Inc., USA

SOURCE:

PCT Int. Appl., 129 pp.

DOCUMENT TYPE:

Patent

CODEN: PIXXD2

LANGUAGE:

English

FAMILY ACC. NUM. COUNT:

PAT	TENT NO.				KIND DATE				Í	APPL:	ICAT	ION 1		DATE				
	2002 2002				A2 20020214 A3 20020906			1	WO 2	001-	US25		20010809 <					
	W:	AE,	AG,	AL,	AM,	AT,	AU,	AZ,	BA,	BB,	BG,	BR,	BY,	BZ,	CA,	CH,	CN,	
							DK,											
		•	•				IN,		•	•	•	•	•	•	•		•	
		-		•	•		MD,	-			-			•	•		•	
							SI,											
		UZ,	VN,	YU,	ZA,	ZW,	AM,	AZ,	BY,	KG,	KZ,	MD,	RU,	ТJ,	TM	-	•	
	RW:	GH,	GM,	KE,	LS,	MW,	MZ,	SD,	SL,	SZ,	TZ,	UG,	ZW,	AT,	BE,	CH,	CY,	
		DE,	DK,	ES,	FI,	FR,	GB,	GR,	IE,	IT,	LU,	MC,	NL,	PT,	SE,	TR,	BF,	
		ВJ,	CF,	CG,	CI,	CM,	GΑ,	GN,	GQ,	GW,	ML,	MR,	NE,	SN,	TD,	TG		
WO	2001	0929	91		A2		2001	1206	1	WO 2	001-	US17:	352		2	0010	529 <	
WO	2001	0929	91		A3		2002	8080										
	W:	AE,	AG,	AL,	AM,	AT,	AU,	AZ,	BA,	BB,	BG,	BR,	BY,	BZ,	CA,	CH,	CN,	
		co,	CR,	CU,	CZ,	DE,	DK,	DM,	DZ,	EC,	EE,	ES,	FI,	GB,	GD,	GE,	GH,	
		GM,	HR,	HU,	ID,	IL,	IN,	IS,	JP,	ΚE,	KG,	KP,	KR,	ΚZ,	LC,	LK,	LR,	
		LS,	LT,	LU,	LV,	MA,	MD,	MG,	MK,	MN,	MW,	MX,	MZ,	NO,	NZ,	PL,	PT,	
		RO,	RU,	SD,	SE,	SG,	SI,	SK,	SL,	ТJ,	TM,	TR,	TT,	TZ,	UA,	UG,	UZ,	
		VN,	YU,	ZA,	ZW													
	RW:	GH,	GM,	KE,	LS,	MW,	MZ,	SD,	SL,	SZ,	TZ,	UG,	ZW,	AM,	ΑZ,	BY,	KG,	
		KZ,	MD,	RU,	TJ,	TM,	AT,	BE,	CH,	CY,	DE,	DK,	ES,	FI,	FR,	GB,	GR,	
		IE,	IT,	LU,	MC,	NL,	PT,	SE,	TR,	BF,	ВJ,	CF,	CG,	CI,	CM,	GΑ,	GN,	
		GW,	ML,	MR,	NE,	SN,	TD,	TG										
CA	2417	358			AA		2002	0214		CA 2	001-	2417	358		2	0010	809 <	

```
AU 2001083275
                         Α5
                                20020218
                                            AU 2001-83275
                                                                   20010809 <--
    EP 1307579
                         A2
                                20030507
                                            EP 2001-962062
                                                                   20010809
         R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
             IE, SI, LT, LV, FI, RO, MK, CY, AL, TR
     JP 2004520008
                          T2
                                20040708
                                            JP 2002-517818
                                                                   20010809
                                            US 2000-224038P
PRIORITY APPLN. INFO.:
                                                                P
                                                                   20000809
                                            US 2000-237382P
                                                                Р
                                                                   20001004
                                            US 2000-248387P
                                                                   20001113
                                                                P
                                            US 2001-867845
                                                                Α
                                                                   20010529
                                            US 2000-207331P
                                                                P
                                                                   20000530
                                            WO 2001-US25112
                                                                W
                                                                   20010809
OTHER SOURCE(S):
```

CASREACT 136:183657; MARPAT 136:183657

GΙ

Ι

AB The present invention relates to compds., such as I, made by a subset of modules from one or more polyketide synthase ("PKS") genes that are used as starting material in the chemical synthesis of novel mols., particularly naturally occurring polyketides or derivs. thereof. The biol. derived intermediates ("bio-intermediates") generally represent particularly difficult compds. to synthesize using traditional chemical approaches due to one or more stereocenters. In one aspect of the invention, an intermediate in the synthesis of epothilone is provided that feeds into the synthetic protocol of Danishefsky and co-workers. In another aspect of the invention, intermediates in the synthesis of discodermolide are provided that feed into the synthetic protocol of Smith and co-workers. By taking advantage of the inherent stereochem. specificity of biol. processes, the syntheses of key intermediates and thus the overall syntheses of compds. like epothilone and discodermolide are greatly simplified.

IT 252342-54-4P

RL: BMF (Bioindustrial manufacture); BPN (Biosynthetic preparation); IMF (Industrial manufacture); RCT (Reactant); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation); RACT (Reactant or reagent) (process for the biomediated preparation of intermediates for use in the synthesis of polyketides, such as epothilone D and discodermolide)

RN 252342-54-4 CAPLUS

CN Phosphonium, [(2R,3R,4S,5Z,8S,9R,10R,11S,12S,13Z)-3,9-bis[[(1,1dimethylethyl)dimethylsilyl]oxy]-11-[(4-methoxyphenyl)methoxy]-2,4,6,8,10,12-hexamethyl-5,13,15-hexadecatrienyl]triphenyl-, iodide (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (+). Double bond geometry as shown.

• I-

L5 ANSWER 4 OF 8 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER:

2001:412212 CAPLUS

DOCUMENT NUMBER:

135:19496

TITLE:

Preparation of intermediates for the synthesis of discodermolides and their polyhydroxy dienyl lactone

derivatives for pharmaceutical use

INVENTOR(S):

Smith, Iii Amos B.; Beauchamp, Thomas J.; Lamarche,

Matthew J.; Arimoto, Hirokazu

PATENT ASSIGNEE(S):

The Trustees of the University of Pennsylvania, USA

U.S., 126 pp., 6096904 Cont.-in-part of U.S.

6,096,904. CODEN: USXXAM

DOCUMENT TYPE:

Patent

LANGUAGE:

SOURCE:

English

FAMILY ACC. NUM. COUNT: 6

	ENT				KIN	D	DATE			APPLICATION NO.						DATE				
US	6242	616			B1 20010605			•	 US 1	999-	 4556		19991207 <							
US	5789	605			A 1998080			0804		US 1	996-	7598	17		19961203 <					
US	6031	133			Α		2000	0229		US 1	998-	2187	8		1	9980	211	<		
	6096	904			Α		2000	0801		US 1	998-	1215	51		19980723 <					
CA	2393	968			AA		2001	0614		CA 2	000-	2393	968		2	0001	206	<		
	2001										000-									
											BG,									
											FI,									
											KR,									
											MZ,									
											TT,									
			ZA,		J_,	J.,	OL,	10,	-11,	***,	11,	14,	OA,	00,	05,	02,	V11,			
	₽₩•	•	•		T.S	MW	M7.	g D	ST.	97	TZ,	uc	7147	አጥ	D.C	Сп	cv			
	144.										LU,									
																IK,	Dr,			
110	2002										MR,					0001	200	_		
	2002									05 2	000-	1309	29		2	0001	206	<		
	6870							0322		^					_					
EP	1248										000-									
	R:										IT,	LI,	LU,	NL,	SE,	MC,	PT,			
								MK,												
	2003																			
	2005						2005	0324		US 2004-779049						20040213				
WO	2005	0793	78		A2		2005	0901	1	WO 2	005-	US46	43		2	0050	211			
	W:	AE,	AG,	AL,	AM,	AT,	AU,	AZ,	BA,	BB,	BG,	BR,	BW,	BY.	BZ.	CA.	CH.			

```
CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD,
             GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC,
             LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI,
            NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY,
             TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW
         RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM,
             AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK,
             EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT,
             RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML,
            MR, NE, SN, TD, TG
PRIORITY APPLN. INFO.:
                                            US 1996-759817
                                                                 Al 19961203
                                            US 1998-21878
                                                                 A1 19980211
                                            US 1998-121551
                                                                A2 19980723
                                            US 1999-455649
                                                                Α
                                                                   19991207
                                            US 2000-730929
                                                                A1 20001206
                                            WO 2000-US32996
                                                                W
                                                                   20001206
                                            US 2004-779049
                                                                   20040213
                                                                Α
OTHER SOURCE(S):
                         CASREACT 135:19496; MARPAT 135:19496
```

GΙ

R140 COR16 R150 Me R150 CHO

R12 O I SEt III

$$H_2C$$
 R^1 R^2 R^3 R^6 R^6 R^8 R^8

Preparation of intermediates, such as I [R11, R12 = alkyl; R14, R15 = acid AB labile protecting groups; R16 = H, alkyl] and II [R1, R2, R7, R8 = alkyl; R3, R6, R16 = H, alkyl; R4, R9 = acid labile hydroxyl protecting group; R25 = oxidatively labile hydroxyl protecting group; X = :C(J)R16, a Wittig olefination formed from a pyranylalkyl ketone, such as I and II (X = P+Ph3I-)], for the synthesis of discodermolides and their analogs, which are useful as pharmaceuticals, was presented. Thus, synthon III (R14 = R15 = SiMe2CMe3) was prepared via a multistep synthetic sequence starting from (2R)-3-hydroxy-2-methylpropanoic acid Me ester. The synthetic utility of II was subsequently demonstrated by its use in the preparation of (-)-discodermolide.

IT 252342-54-4P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(preparation of intermediates for the synthesis of discodermolides and their polyhydroxy dienyl lactone derivs. for pharmaceutical use)

RN 252342-54-4 CAPLUS

CN Phosphonium, [(2R,3R,4s,5Z,8s,9R,10R,11s,12s,13Z)-3,9-bis[[(1,1-dimethylethyl)dimethylsilyl]oxy]-11-[(4-methoxyphenyl)methoxy]-2,4,6,8,10,12-hexamethyl-5,13,15-hexadecatrienyl]triphenyl-, iodide (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (+). Double bond geometry as shown.

• I-

REFERENCE COUNT:

THERE ARE 30 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 5 OF 8 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER:

2000:597937 CAPLUS

DOCUMENT NUMBER:

133:335118

TITLE:

Evolution of a Gram-Scale Synthesis of

(+)-Discodermolide

AUTHOR(S):

Smith, Amos B., III; Beauchamp, Thomas J.; LaMarche, Matthew J.; Kaufman, Michael D.; Qiu, Yuping; Arimoto,

Hirokazu; Jones, David R.; Kobayashi, Kaoru

CORPORATE SOURCE:

Department of Chemistry Monell Chemical Senses Center

and Laboratory for Research on the Structure of

Matter, University of Pennsylvania, Philadelphia, PA,

19104, USA

SOURCE:

Journal of the American Chemical Society (2000

), 122(36), 8654-8664

CODEN: JACSAT; ISSN: 0002-7863

PUBLISHER:

American Chemical Society

DOCUMENT TYPE:

Journal

LANGUAGE:

English

OTHER SOURCE(S):

CASREACT 133:335118

GI

AB An efficient, highly convergent, stereocontrolled total synthesis of the potent antimitotic agent (+)-discodermolide (I) has been achieved on gram scale. Key elements of the successful strategy include (1) elaboration of three advanced fragments from a common precursor (CP) which embodies the repeating stereochem. triad of the discodermolide backbone, (2) \(\sigma\)-bond installation of the Z trisubstituted olefin, exploiting a modified Negishi cross-coupling reaction, (3) synthesis of a late-stage phosphonium salt utilizing high pressure, and (4) Wittig installation of the Z disubstituted olefin and the terminal (Z)-diene.

IT 252342-54-4P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(evolution of a gram-scale synthesis of (+)-discodermolide)

RN 252342-54-4 CAPLUS

CN Phosphonium, [(2R,3R,4S,5Z,8S,9R,10R,11S,12S,13Z)-3,9-bis[[(1,1-dimethylethyl)dimethylsilyl]oxy]-11-[(4-methoxyphenyl)methoxy]-2,4,6,8,10,12-hexamethyl-5,13,15-hexadecatrienyl]triphenyl-, iodide (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (+). Double bond geometry as shown.

THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 6 OF 8 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER:

2000:531688 CAPLUS

DOCUMENT NUMBER:

133:135166

TITLE:

Preparation of intermediates for the synthesis of discodermolides and their polyhydroxy dienyl lactone

derivatives for pharmaceutical use

INVENTOR(S):

Smith, Amos B., III; Qiu, Yuping; Kaufman, Michael; Arimoto, Hirokazu; Jones, David R.; Kobayashi, Kaoru;

Beauchamp, Thomas J.

PATENT ASSIGNEE(S):

The Trustees of the University of Pennsylvania, USA

SOURCE:

U.S., 83 pp., Cont.-in-part of U.S. 5,789,605.

CODEN: USXXAM

DOCUMENT TYPE:

Patent

LANGUAGE:

English

FAMILY ACC. NUM. COUNT:

PATENT INFORMATION:

								APPLICATION NO.						DATE					
U:	5 6096 5 5789 A 2338 D 2000 D 2000	904			Α		2000	0801		US 1	998-1 996-1	1215	51		1	9980	723	<	
បុន	5789	605			Α		1998	0804		US 1	996-	7598	17		1	9961	203	<	
CZ	A 2338	310			AA			0203		CA 1	999-	2338	310		1	9990	720	<	
W	2000	0048	65		A2			0203	,	WO 1	999-1	US16	369		1	9990	720	<	
WC	2000	0048	65		A3		2000								_			•	
	W:	AU,	CA.	JР															
		AT,			CY,	DE,	DK,	ES,	FI,	FR,	GB,	GR,	IE,	IT,	LU,	MC,	NL,		
A	J 9952	190			A1		2000	0214		AU 1	999-	5219	0		1	9990	720	<	
A	J 7498	344			R2		2002	0704											
El	1105	383			A2		2001	0613		EP 1	999-	9373	30		1	9990	720	<	
		AT, IE,	TOT			DK,	ES,	FR,	GB,	GR,	IT,	LI,	LU,	NL,	SE,	MC,	PT,		
JI	2002	5213	17		Т2		2002	0716		JP 2	000-	5608	58		1:	9990	720	<	
បះ	2002 6 6242	616			В1		2001	0605	1	US 1	999-	4556	49		1:	9991	207	<	
បះ	3 2005	0653	53		A 1		2005	0324	1	US 2	004-	7790	49		2	0040	213		
W	2005	0793	78		A2		2005	0901	WO 2005-US4643					2	0050	211			
	W:	ΑE,	AG,	AL,	AM,	AT,	AU,	ΑZ,	BA,	BB,	BG,	BR,	BW,	BY,	BZ,	CA,	CH,		
		CN,	co,	CR,	CU,	CZ,	DE,	DK,	DM,	DZ,	EC,	EE,	EG,	ES,	FI,	GB,	GD,		
		GE,	GH,	GM,	HR,	HU,	ID,	IL,	IN,	IS,	JP,	KE,	KG,	KP,	KR,	KZ,	LC,		
		LK,	LR,	LS,	LT,	LU,	LV,	MA,	MD,	MG,	MK,	MN,	MW,	MX,	MZ,	NA,	NI,		
		NO,	NZ,	OM,	PG,	PH,	PL,	PT,	RO,	RU,	SC,	SD,	SE,	SG,	SK,	SL,	SY,		
		ТJ,	TM,	TN,	TR,	TT,	TZ,	UA,	UG,	US,	UZ,	VC,	VN,	YU,	ZA,	ZM,	ZW		
	RW:	BW,	GH,	GM,	KE,	LS,	MW,	ΜZ,	NA,	SD,	SL,	SZ,	TZ,	UG,	ZM,	ZW,	AM,		
		ΑZ,	BY,	KG,	KZ,	MD,	RU,	ТJ,	TM,	AT,	BE,	BG,	CH,	CY,	CZ,	DE,	DK,		
											IT,								
		RO,	SE,	SI,	SK,	TR,	BF,	ВJ,	CF,	CG,	CI,	CM,	GA,	GN,	GQ,	GW,	ML,		
			NE,																
PRIORI	TY APE	PLN.	INFO	. :					1	US 1	996-	7598	17		A2 1	9961	203		
									1	US 1	998-2	2187	8		A1 1	9980	211		
									1	US 1	998-	1215	51		A 1	9980	723		
											999-1				W 1	9990	720		
															A2 19991207				
											000-		29		A1 2	0001	206		
											004-				A 2				

OTHER SOURCE(S): MARPAT 133:135166

GI

$$R^{14}O$$
 COR^{16} $R^{15}O$ $R^{$

AΒ Preparation of intermediates, such as I [R11, R12 = alkyl; R14, R15 = acid labile protecting groups; R16 = H, alkyl], for the synthesis of discodermolides and their analogs, which are useful as pharmaceuticals, was presented. Thus, synthon II (R14 = R15 = SiMe2CMe3) was prepared via a multistep synthetic sequence starting from (2R)-3-hydroxy-2methylpropanoic acid Me ester. The synthetic utility of II was subsequently demonstrated by its use in the preparation of (-)-discodermolide.

TT 252342-54-4P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(preparation of intermediates for the synthesis of discodermolides and their polyhydroxy dienyl lactone derivs. for pharmaceutical use)

RN

252342-54-4 CAPLUS Phosphonium, [(2R, 3R, 4S, 5Z, 8S, 9R, 10R, 11S, 12S, 13Z)-3, 9-bis[[(1,1-CN dimethylethyl)dimethylsilyl]oxy]-11-[(4-methoxyphenyl)methoxy]-2,4,6,8,10,12-hexamethyl-5,13,15-hexadecatrienyl]triphenyl-, iodide (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (+). Double bond geometry as shown.

D_I-

REFERENCE COUNT: 31 THERE ARE 31 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

ANSWER 7 OF 8 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2000:84572 CAPLUS

DOCUMENT NUMBER: 132:137207

TITLE: Preparation of intermediates for the synthesis of

discodermolides and their polyhydroxy dienyl lactone

derivatives for pharmaceutical use

INVENTOR(S): Smith, Amos B. Iii; Qiu, Yuping; Kaufman, Michael;

Arimoto, Hirokazu; Jones, David R.; Kobayashi, Kaoru;

Beauchamp, Thomas J.

PATENT ASSIGNEE(S):

The Trustees of the University of Pennsylvania, USA

PCT Int. Appl., 201 pp.

CODEN: PIXXD2

DOCUMENT TYPE:

Patent

LANGUAGE:

SOURCE:

English

FAMILY ACC. NUM. COUNT:

PATENT INFORMATION:

I	PATENT NO.				KIND DATE			APPLICATION NO.						DATE					
		2000				A2			0203 0921		WO 1					1	9990	720	<- -
				CA,															
			•	•		CY.	DE.	DK.	ES,	FI.	FR.	GB.	GR.	IE.	IT.	LU.	MC.	NI.	
			PT,		,	•	,	,	,	,	,	,	,	,	,	,	,	,	
τ	JS	6096	•			Α		2000	0801		US 1	998-	1215	51		1	9980	723	<
(CA	2338	310			AA			0203										
		9952							0214								9990		
		7498												-		_			•
		1105									EP 1	999-	9373	30		1	9990	720	<
									FR,										
			IE,				,	,	,	,	,	,	,	,	,	,	,	,	
ز	JP	2002				Т2		2002	0716		JP 2	000-	5608	58		1	9990	720	<
		2005																	
									AZ,										
									DK,										
									IL,										
				-	-	•	•	•	MA,	•	•		•			•	•	•	
									PT,										
									UA,										
		RW:							MZ,										
									ТJ,								-	-	
			EE,	ES,	FI,	FR.	GB,	GR,	HU,	IE,	IS,	IT.	LT.	LU.	MC.	NL.	PL.	PT.	
							-	-	ВJ,	-	-		-	-	•	-		•	
						TD,		•		•	•	•	•	•	•	~,	•	•	
PRIOR	ITY	APP	LN.	INFO	.:	•					US 1	998-	1215	51		A 1	9980	723	
											us 1	996-	7598	17		A2 1	9961	203	
											WO 1					W 1	9990	720	
											US 2	004-	7790	49	1	A 2	0040	213	
OMITTED	~	***	101			147.5		122	1 2 7 2										

OTHER SOURCE(S): GΙ

MARPAT 132:137207

AB Preparation of intermediates, such as I [R11, R12 = alkyl; R14, R15 = acid labile protecting groups; R16 = H, alkyl], for the synthesis of discodermolides and their analogs, which are useful as pharmaceuticals, was presented. Thus, synthon II (R14 = R15 = SiMe2CMe3) was prepared via a multistep synthetic sequence starting from (2R)-3-hydroxy-2methylpropanoic acid Me ester. The synthetic utility of II was

subsequently demonstrated by its use in the preparation of (-)-discodermolide.

IT 252342-54-4P

> RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(preparation of intermediates for the synthesis of discodermolides and their polyhydroxy dienyl lactone derivs. for pharmaceutical use)

RN

252342-54-4 CAPLUS
Phosphonium, [(2R,3R,4S,5Z,8S,9R,10R,11S,12S,13Z)-3,9-bis[[(1,1-CN dimethylethyl)dimethylsilyl]oxy]-11-[(4-methoxyphenyl)methoxy]-2,4,6,8,10,12-hexamethyl-5,13,15-hexadecatrienyl]triphenyl-, iodide (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (+). Double bond geometry as shown.

• I-

ANSWER 8 OF 8 CAPLUS COPYRIGHT 2006 ACS on STN T.5

ACCESSION NUMBER: 1999:694867 CAPLUS

132:35548 DOCUMENT NUMBER:

TITLE: Gram-Scale Synthesis of (+)-Discodermolide

AUTHOR(S): Smith, Amos B., III; Kaufman, Michael D.; Beauchamp,

Thomas J.; LaMarche, Matthew J.; Arimoto, Hirokazu

CORPORATE SOURCE: Department of Chemistry Monell Chemical Senses Center

and Laboratory for Research on the Structure of

Matter, University of Pennsylvania, PA, 19104, USA

SOURCE: Organic Letters (1999), 1(11), 1823-1826

CODEN: ORLEF7; ISSN: 1523-7060

PUBLISHER: American Chemical Society

DOCUMENT TYPE: Journal

English LANGUAGE:

A triply convergent, highly efficient second-generation synthesis of the potent antimitotic agent (+)-discodermolide has been achieved on a 1-g scale.

IT 252342-54-4P

> RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(gram-scale synthesis of (+)-discodermolide)

RN 252342-54-4 CAPLUS

Phosphonium, [(2R,3R,4S,5Z,8S,9R,10R,11S,12S,13Z)-3,9-bis[[(1,1-CN dimethylethyl)dimethylsilyl]oxy]-11-[(4-methoxyphenyl)methoxy]-2,4,6,8,10,12-hexamethyl-5,13,15-hexadecatrienyl]triphenyl-, iodide (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (+). Double bond geometry as shown.

• I-

REFERENCE COUNT:

THERE ARE 24 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

=> d his

(FILE 'HOME' ENTERED AT 09:44:18 ON 28 FEB 2006)

FILE 'REGISTRY' ENTERED AT 09:44:27 ON 28 FEB 2006

L1 STRUCTURE UPLOADED

L2 1 S L1

L3 14 S L1 FULL

FILE 'CAPLUS' ENTERED AT 09:45:02 ON 28 FEB 2006

L4 18 S L3 FULL

L5 8 S L4 AND PY<2003

=> log y

COST IN U.S. DOLLARS	SINCE FILE	TOTAL
	ENTRY	SESSION
FULL ESTIMATED COST	43.29	210.44
DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)	SINCE FILE	TOTAL
	ENTRY	SESSION
CA SUBSCRIBER PRICE	-6.00	-6.00
CA SUBSCRIBER PRICE	-6.00	-6.00

STN INTERNATIONAL LOGOFF AT 09:45:48 ON 28 FEB 2006